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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,447	03/19/2004	Leesa M. Noujeim	SUN040012	7277
33438	7590	06/30/2005		EXAMINER
HAMILTON & TERRILE, LLP				KIM, PAUL L
P.O. BOX 203518			ART UNIT	PAPER NUMBER
AUSTIN, TX 78720			2857	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/804,447	NOUJEM, LEESA M.
	Examiner Paul Kim	Art Unit 2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 19 March 2004.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,3-8,10-15 and 17-21 is/are rejected.

7) Claim(s) 2,9 and 16 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 8, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Gheewala.

With regard to claims 1 and 8, Gheewala teaches a method and apparatus comprising: constructing an array of pins (fig. 4), arranging a plurality of differential pairs to provide an arrangement, exciting each of the differential pairs, monitoring coupled noise (abstract & col. 10, lines 58-62), and analyzing the pin arrangement based upon the monitoring (col. 11, line 18 to col. 12, line 7).

With regard to claims 3 and 10, Gheewala teaches the arrangement including maximally packed differential pairs (fig. 9a & 9b).

With regard to claims 4 and 11, Gheewala teaches the arrangement including power and ground pairs (col. 10, lines 49-52).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7 and 12-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Gheewala.

Gheewala teaches a certain number of pairs per power and ground pin being arranged but does not specify the quantity of pairs. However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to group pairs into fours, sixes, or eights, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

5. Claims 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gheewala in view of Hibdon et al.

With regard to claim 15, Gheewala teaches a system for analyzing pin arrangements for determining the effect of differential pair placement on signal quality comprising: constructing an array of pins (fig. 4), arranging a plurality of differential pairs to provide an arrangement, exciting each of the differential pairs, monitoring coupled noise (abstract & col. 10, lines 58-62), and analyzing the pin arrangement based upon the monitoring (col. 11, line 18 to col. 12, line 7). Gheewala, however, does not specify the system comprising a processor and memory. Hibdon et al teaches a system for testing pin arrangements of a circuit that comprises a processor and memory (fig. 1). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include a memory and processor into Gheewala's system, as

taught by Hibdon et al, so as to derive the benefit of a system that can efficiently process and manipulate data for enhanced data analysis.

With regard to claim 17, Gheewala teaches the arrangement including maximally packed differential pairs (fig. 9a & 9b).

With regard to claim 18, Gheewala teaches the arrangement including power and ground pairs (col. 10, lines 49-52).

With regard to claims 19-21, Gheewala teaches a certain number of pairs per power and ground pin being arranged but does not specify the quantity of pairs.

However, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to group pairs into fours, sixes, or eights, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Allowable Subject Matter***

6. Claims 2, 9, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach creating a coupling plot based on the monitoring.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barr et al, Riccioni, Pailthorp, and Miller et al all teach a method for testing a pin grid arrangement.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is 571-272-2217. The examiner can normally be reached on Monday-Thursday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

PK  
June 26, 2005

